



TRIAL DETAILS

Year- 2019

Research Facility- Colorado State University, San Luis Valley Research Center

Crops- Russet Potato

Collaborator: Samuel YC Essah

Fertilizer- 11-37-0

Soil phosphorus level- Residual soil extractable phosphorus (P) was 120 ppm (240 lbs. P/acre).

Objective:

The objective of this study was to evaluate the effect of Nutricharge with phosphorus (P) fertilizer application on the performance of Russet potato. The trial is randomized and replicated four times

YIELD RESULTS			
TREATMENT	YIELD CWT	> 4 oz	> 6oz
CONTROL	357	310	204
100% GSP	391	318	209
100 % GSP + NC	415 +6%	365 +15%	249 +19%
75 % GSP + NC	415 +6%	349 +10%	232 +11%

AGRONOMIC PHOSPHORUS USE EFFICIENCY		
	TOTAL YIELD	4 oz
100 % GSP	6.5	5.3
100 % GSP + NC	9.2	7.8
75 % GSP + NC	6.9	6.1

(APUE)- Tuber yield (cwt/acre)/Phosphorus fertilizer applied (lb/acre)

Results:

Application of 100% grower standard phosphorus fertilizer with Nutricharge added increased total tuber yield, marketable size (> 4 oz.) tuber yield, and large marketable size (> 6 oz.) tuber yield, by 6%, 15%, and 19%

Application of 75% grower standard P fertilizer with Nutricharge added increased total yield, marketable size tuber yield, and large marketable size tuber yield by 6%, 10%, and 11%,

Phosphorus fertilizer use efficiency was higher for the production of total tuber yield and marketable size (> 4 oz.) tuber yield when Nutricharge was added to P fertilizer applied P use efficiency was increased by **42%** and **47%**, for total tuber yield and marketable size tuber yield, respectively, when 75% grower standard P fertilizer was applied with Nutricharge